Montana Department of ENVIRONMENTAL QUALITY

ENFORCEMENT DIVISION

CLEANUP REPORT GUIDANCE DOCUMENT
For
SPILLS OR RELEASES THAT IMPACT SOILS

REV: 11/2007

The Enforcement Division (ENFD) of the Montana Department of Environmental Quality (DEQ) oversees the cleanup of spills or releases of hazardous or deleterious substances including petroleum products that do not require long-term remediation. This guidance document was developed to aid consultants and responsible parties in providing ENFD with an adequate cleanup report (Report) for spills or releases that impact soils. DEQ's Spill Management and Reporting Policy is available at: http://www.deq.mt.gov/enf/spillpol.asp

ENFD applies DEQ's Tier 1, Risk-Based Corrective Action (RBCA), Risk-Based Screening Levels (RBSLs), revised October 2007, when evaluating petroleum-impacted sites for closure. DEQ's RBCA document is available at: http://www.deq.mt.gov/rem/hwc/rbca/NewRBCA7-2007/10-22-07Tier1Guidance.pdf. In addition, ENFD utilizes DEQ's Petroleum Release Section (PRS) Technical Guidance Document #7, revised August 2007. DEQ's PRS Technical Guidance Document #7 is available at: http://www.deq.mt.gov/LUST/TechGuidDocs/techguid7.pdf.

ENFD applies the U.S. Environmental Protection Agency's Region IX Preliminary Remediation Goals (PRGs) to address spills or releases of other chemical (non-petroleum) products. The cleanup requirements of a non-petroleum spill or release should be discussed with the ENFD project manager before any remedial activity is conducted. DEQ's Site Response Section (SRS) developed a flowchart that is useful in screening soils for contaminants of potential concern at release or spill sites. The flowchart is available at: http://www.deq.mt.gov/StateSuperfund/VCRA_Guide/AttCsoilscreenproc.pdf

It is recommended that the responsible party or environmental consultant discuss the sample collection methodolo gy or sampling plan with the ENFD project manager prior to initiating assessment or remedial activities. ENFD's main number is (406) 444-0379.

At a minimum, the following information should be provided in the Report and submitted to ENFD so the project manager can evaluate compliance with applicable laws and rules, and determine what further actions are warranted or if "no further action" is appropriate for the spill or release site. ENFD feels that it is appropriate that spills or releases be fully remediated in less than 30 days, and the final Report, discussing assessment and remedial actions be submitted within 90 days from the date the incident occurs. In instances where state waters are impacted or threatened to be impacted, it is appropriate that more immediate removal/response actions be initiated in order to protect state waters.

Please note that other DEQ programs and other state agencies may have different report requirements.

1. Introduction

The Report should provide a brief summary of events surrounding the incident that caused the release or spill, including a description of and the accurate volume of the material spilled or released, and a detailed description of how the volume was determined. The Report should also provide the name, mailing address, and telephone number of:

- The responsible party;
- The contact person if different than the responsible party;

- The person submitting the Report; and
- Any landowner whose property was impacted as a result of the release or spill.

2. Site Description

Provide an accurate description of the incident location. The following information should be provided:

- Incident site street address, city, and county where the incident is located. If the incident occurred on a highway, road, etc., provide the road name and reference the nearest mile marker.
- Incident site Township, Range, Section, ¼, ¼ (TRS, ¼, ¼), including the name of the USGS 7.5-Minute Quadrangle map.
- Incident site latitude and longitude. The coordinates should be reported in **decimal degrees** and contain no more than five decimal places (e.g., 46.12345, –114.12345). Include a discussion on how the coordinates were acquired.

3. Site History

Provide a brief site history if the incident occurred at a residence, business, or facility. A site history isn't required if the incident occurred along a roadway or vacant field. However, a discussion on land use should be provided, e.g., ranching or agriculture operation, or if it is in an active oil field. If the incident occurred in an active oil field, provide the proper name of the oil field. To obtain this information, contact the Montana Oil and Gas Conservation Division at (406) 656-0040.

4. Hydrogeologic Conditions

a. Geology

Provide a discussion of site geology and bedrock conditions, including a description of geology encountered, e.g., soil and/or rock types, and lithology. In addition, soil boring logs should be provided if available.

b. Hydrology

Provide a discussion of site-specific ground water and surface water information to the extent known. Include well depth, static water level, location, and use of any wells located in close proximity (1/4 mile) to the incident site location. The distance to the nearest surface water body and ground water well, regardless of use, should be provided. A discussion on surface gradient and assumed ground water flow direction should also be provided. Well logs are available from the Montana Bureau of Mines and Geology Ground Water Information Center on their website at: http://mbmggwic.mtech.edu/

The depth to ground water is determined using the measured static water level in ground water wells located within 500 feet of the release or spill. If ground water data within 500 feet is unavailable, or it is extraordinarily difficult to find ground water information, describe the difficulty obtaining the information and apply the most conservative RBCA standard. Ground water information is not required if the most conservative RBCA, RBSLs are applied to the site and residual contaminant concentrations do not exceed the RBSLs.

5. Assessment, Remedial, and Sampling Activities

Provide a detailed description of assessment and remedial activities, including the following:

- A description of the soil removal activities including the final dimensions of all excavations. If the depth of the excavation is greater than two feet, it is considered subsurface contamination and requires that the lateral, as well as the vertical, extent and magnitude of contamination be defined. **Note:** ENFD requires that soil samples be collected from the excavation sidewalls if the depth of the excavation exceeds two feet.

- A description of field screening methods, if applicable. The description should include:

    - Type, make and model of equipment used;
    - Calibration procedures used and type of calibration standard;
    - Date and time of last calibration [Note: most field screening instruments should be calibrated daily and under the same ambient conditions where screening takes place]; and
    - Method used and field screening results. If heated headspace is used as a field screening method, a description of the procedure is required. The field screening results should be presented in table form. **Field screening analysis is not adequate for site closure.** Laboratory sample analysis is required and the sample analytical results, from a DEQ-approved laboratory, must be provided in the Report. DEQ's approved analytical laboratory list is available at: http://www.deq.state.mt.us/LUST/downloadables/lablist/appvdlablist.pdf

- A description of sample collection activities, including the sample collection methodology, sample collection location, and the depth where each sample was collected. Please note that composite sampling is an acceptable method of soil sampling for diesel fuel and heavier petroleum hydrocarbon spills and releases. Compositing soil samples collected from more than one sidewall is discouraged. Field compositing of soil samples submitted for volatile petroleum hydrocarbon or volatile organic compounds analysis is NOT acceptable.

- A description of assessment activities to define the lateral and vertical extent and magnitude of contamination. The extent and magnitude of a release or spill is defined when the investigation, through laboratory data obtained from samples collected from excavations, test pits, or soil borings, etc. demonstrates that the contamination is attenuating both horizontally and vertically to where there are no RBCA, RBSL exceedences. Please note that this approach is consistent with DEQ's PRS and SRS.

- A description of contaminated soil disposal, including receipts identifying where and how much contaminated soil was disposed. Note: Petroleum hydrocarbon-contaminated soil is a Group II waste requiring disposal at a permitted solid waste disposal facility. The solid waste disposal facility should be contacted prior to initiating remedial activities to obtain its requirements for waste profiling and disposal. For information on licensing a one-time landfarm, contact DEQ's Solid Waste Program at (406) 444-5300. Additional information on one-time landfarms is also available at: http://www.deq.mt.gov/SolidWaste/newapplications/onetimeLandfarm.pdf

6. Sample Analytical Results

Provide a discussion of the laboratory analytical methods and the sample analytical results. The sample analytical results should be summarized in a table that includes the sample identification number. The sample identification number should correspond to the sample identification number provided on the chain of custody (CoC) and laboratory data report.

The complete laboratory analytical data package must be provided, including the CoC, sample receipt checklist or other document that provides the sample temperature when received at the laboratory. Samples that arrive at the laboratory with a sample temperature greater than 4^{o} C may result in ENFD invalidating the sample analytical data.

7. Summary

Provide a brief summary of assessment and remedial activities and a discussion of sample analytical results if the remaining petroleum hydrocarbon concentrations are greater than 200 PPM total extractable hydrocarbons or above the applicable RBCA, RBSLs.

8. Conclusions and Recommendations

Provide conclusions based on sample analytical data in comparison with the applicable RBCA RBSLs or PRGs. Provide recommendations for additional assessment or remedial activities or closure with a discussion and rationale for supporting the recommendations. The conclusion and recommendations should be based on sample analytical results, ground water information, or other site-specific information. If site closure is recommended, a justification must be provided to ENFD. Reporting that the petroleum hydrocarbon-impacted soils left in place are below RBCA RBSLs or PRGs is not sufficient. The lateral and vertical extent of the contamination must be defined and the volume of impacted residual soils must be quantified.

9. Site Maps

The following types of maps should be provided in the Report:

a. A general site location map. The map can be a USGS 7.5 Minute Quadrangle map, road map, or an aerial photograph. All maps should have the incident location clearly identified. The Montana Natural Resource Information System website has topographic maps and aerial photographs available at: http://maps2.nris.state.mt.us/mapper/

b. A site map showing location of roads, buildings, waterways, etc. It is recommended that this map be drawn to scale. The location of the release or spill should be clearly identified on the site map. This map should include a north arrow, map scale, and all pertinent site features clearly labeled.

c. A sample collection location map. This map should show the excavation outline with approximate sample collection points identified and labeled with the corresponding sample identification number. The sample collection map does not have to be to scale, but the actual excavation dimensions should be provided in the Report text.

d. A ground water elevation map (if applicable).

10. Photographs

The Report should contain a photographic log documenting assessment, remedial, and sampling activities. A description of the photograph and the direction (view) the photograph was taken should be provided.

If you have any questions about this document, please contact DEQ's ENFD. The final Report should be submitted to the ENFD project manager at the following address within 90 days from the date the release or spill occurred:

Enforcement Division
Department of Environmental Quality
P.O. Box 200901
Helena, MT 59620-0901
(406) 444-0379
http://www.deq.mt.gov/enf/contacts.asp